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Pay reductions and work attitudes: the moderating effect of employee involvement practices

Abstract

Purpose: Since the 2008 financial crisis the UK workforce in general has experienced a period of stagnant and falling wages in both nominal and real terms. The main parties involved remain unsure of the consequences from such a historically unusual phenomenon. The purpose of this paper is twofold: first, to explore the main effect on job satisfaction and organizational commitment of those employees who had experienced pay reductions (nominal wage cuts or pay freezes under a positive inflation rate) as compared with those who experienced nominal pay rises during the recent recession; and second, to examine the moderating effect of employee involvement practices on that relationship. This was done by using aggregated employee perception data to measure organizational employee involvement practices.

Design/ methodology/approach: An employee-employer matched data was used, involving 8489 employees and their associated 497 organizations (medium or large sized). The number of employees from each organization was between 15 and 25. The data used was extracted from the Workplace Employment Relations Study (WERS, 2011) in the UK to which we applied hierarchical linear regression in STATA 13.

Findings: The results indicate that when compared with those employees who had nominal pay rises during the recession, employees who had wage cuts or freezes (with 5% inflation rate), are significantly and negatively associated with their job satisfaction and organizational commitment, even when controlling for important variables such as perception of job insecurity and the degree of adverse impact caused by recession on the organization studied. That is to say, facing the same perception of job loss, those who experienced pay reductions are significantly unhappier and less committed than those who had pay rises. However, the adverse effect of pay reductions on employees' work attitudes is much less in workplaces characterized by a high, as opposed to a low level, of employee involvement practices.

Practical implications: Implications, limitations and further research issues are discussed in light of current employment relations' practices.

Originality/value: The intention is to extend the current debate on employment relations under adverse changes such as pay reductions. Thus, the unique contribution of this study is to examine the value of employee involvement in modifying extreme employee reactions to adverse changes.

Key words: Pay reductions, job satisfaction, organizational commitment, employee involvement

Introduction

The indeterminate nature of both the legal contract of employment and the economic wage-effort bargain means that employees' attitudes to work and their loyalty to the employer have been important elements in deciding the level of effort expended by workers themselves (Hobsbawm, 1960; Thompson, 1967). Fairness of pay allocation is one essential aspect in this contested terrain. Perceived 'felt-fairness' of pay is not only derived from the level of wages (Akerlof, 1982), but is deeply rooted in the equitable nature of wage differentials (Adams, 1963, 1965) relating to the treatment of comparable others (Akerlof and Yellen, 1990; Breza *et al*., 2016; Clark and Oswald, 1996; Card *et al*., 2012; Smith, 2015).

Since the 2008 recession, wage reductions for British workers have been the deepest in a century (Allen, 2013), and British workers have suffered the biggest real-wage fall of any major G20 country (Monaghan and Nardelli, 2013). Recent research has revealed profound challenges for employment relations as continued pay reductions and freezes have caused strikes (Lange *et al.*, 2015), alongside reduced productivity (Cohn, *et al*., 2014), and lower overall performance (Lee and Rupp, 2007). Few of the key parties to the employment relationship have experience of such a phenomenon. The managers who carried out this policy option in mainly non-strategic ways worry about losing key skilled workers and falling morale which then leads to adverse effects on productivity; trade union leaders, when they are involved, fear being by-passed and considered irrelevant as their members seem to have no appetite for wage militancy, but are anxious about job security; and government policy makers are torn between being pleased with lower unit labour costs across the economy, but concerned about skill shortages, migrant labour, and loss of purchasing power in the macro-economy.

We explore this conundrum and offer partial insight into a potential resolution when wage reductions negatively affect work attitudes. By doing so, we attempt to make two specific contributions to the literature. First, there appears to be no systematic research on moderators of the relationship between pay reductions and employee outcomes despite the frequently reported disruptive consequences caused by pay disputes, such as British Airways cabin crew (Topham, 2017), Junior Doctors at NHS (BBC, 2016), and Deutsche Lufhansa (Lange *et al*., 2015). Second, only a few extant studies examined individual characteristics influencing reaction to pay changes (Cohn *et al*., 2014), while research on moderators at organizational level is under-explored. The present study contributes to the increasing acknowledgment of

the beneficial impact of work climate in employment relations (Schreurs *et al.*, 2013; Tomer, 1987). Methodologically, aggregated employee perception was constructed to measure work climate, and Hierarchical Linear Modelling was employed to examine the moderating effect. This is considered to be a more suitable way to handle large data as used here (Davison *et al.*, 2002). The matched employee-employer data compiled is from the British Workplace Employment Relations Study (2014).

Pay reductions and employee attitudes

Total earnings' reductions can include a broad range of cuts to bonuses, benefits, overtime pay, allowances, pensions, and basic pay. The general proposition is that any form of pay cut affects work attitudes; in particular basic wage reductions can damage morale since it is the bedrock of the employment contract-the wage-effort bargain (Bewley, 1999; Smith, 2015). Akerlof (1982) explained the norm: any extra effort (above requirement) made by workers and any extra pay (higher than the supposed market clearing wage rate) offered by employers can be seen as a 'gift exchange'. Therefore, any pay reduction can distort the norm, and further alienate workers from their tasks. This is evidenced by the historical rarity of pay cuts, a phenomenon known as downward nominal wage rigidity, whereby pay rises are widely expected, and pay cuts are seen as a rare necessary evil. Even during recessions, employers prefer layoffs to pay cuts for the fear that pay cuts induce the 'best' workers to quit whileas "layoffs get the misery out of the door" (Bewley, 1999; Saunders, 2017). However, such normal trends have ceased to be dominant since the 2008 economic recession. Across sectors and occupations, two out of three workers in the UK had a pay freeze; the rest had an average pay increase well below the inflation rate (Gammell, 2012). Many workers in the public sector have had a pay freeze for as long as eight years while the inflation rate has remained positive (Public Sector Executive, 2016; ONS, 2017a).

It is therefore helpful to improve our understanding of the link between pay reduction and reduced morale. Researchers have shown that the 'felt-fairness' of pay reductions is not only subject to the absolute amount of pay or pay changes, but also determined by comparisons with relevant reference groups (Card *et al.*, 2012; Clark and Oswald, 1996; Smith, 2015). Both Keynes (1936) and Hicks (1932, 1963) noted that workers are so concerned about the relation of their wages to those workers in similar situations that no employer would dare to unilaterally cut pay (Wootton, 1974). The importance of this perceived fairness is further

developed within aspects of general equity theory (Adams, 1963, 1965). Employees assess the exchange ratio of their rewards (salary, benefits, recognition) against their efforts (skill level and commitment) and then compare this balance sheet of working life with the 'gift-exchange' between comparable others and their employers. On this basis workers adjust their wage-effort bargain to reach perceived equity. This has been well supported by empirical evidence from field experiments: a reduction in nominal pay was found to correlate with reduced productivity, increased absenteeism and quitting (Breza, *et a*l. 2016). Survey data also showed that where pay or pay growth is lower than a comparable group then there is widespread discontent, be it a predicted income (Clark and Oswald, 1996), labour market rate for a certain occupation (Cappelli and Sherer, 1988), median income of the same faculty (Card *et al*., 2014) or median pay growth rate of a comparable group (Smith, 2015).

Due to the clear and direct detrimental effects of pay cuts, employers tend to reduce total wage costs through other means: reducing working hours, unpaid leave, and small cuts in real wages, instead of normal pay cuts (Bewley, 1999). Pay freezes are the preferred form of pay reduction in the UK (Gammell, 2012). Based on payroll records, Elsby *et al*. (2016) reported that 23% of job stayers in Britain experienced nominal wage reductions in 2009-2010 and 2011-2012, but they do not have information, such as reduction in contracted working hours or overtime pay which may be the cause of these pay reductions. Wage reductions during recessions are seen to have an 'insult effect' since employees work harder for the increased job insecurity (Bewley, 2005; Kaufman, 1984). With the inflation rate remaining positive in the UK during the 2008-2012 recession and wide access to information, British workers are well placed to feel the impact of pay freezes (Public Sector Executive, 2016). In contrast, any pay rise is seen as a gesture of recognition that may be appreciated by employees, irrespectively of whether it is above or below the inflation rate. Based on this argument we conjecture that:

Hypothesis 1: employees who experienced a pay reduction (a nominal pay cut or a pay freeze) are significantly correlated with having lower job satisfaction and organizational commitment than those who had pay rises during the same recession.

The moderating effect of employee involvement practices

Some counter-measures from management are required if the consequences of pay cuts are not to spiral into a vicious circle of decline in staff morale. Field experiments have shown that inadequate managerial explanations for pay cuts go hand-in-hand with greater worker

resentment (Breza *et al*., 2016; Cohn *et al*., 2014; Greenberg, 1990). If managers, acting on behalf of the employer, can provide some reasonable and credible account for their decisions to cut or freeze nominal pay, it will help employees understand how any given reallocation of the total wage fund was decided upon (Schaubroeck *et al*., 1994). Sharing key information (financial, investment, and staffing issues) within the organization appears to help internalize challenges and perceptions of fair dealing, and therefore employees are more likely to accept common belt-tightening goals including pay cuts (Akerlof and Kranton, 2000; Kahneman *et al*., 1986).

When facing uncertainty, participation in decision-making increases employees' sense of having some functional control over the situation as well as reducing feelings of hostility (Bordia *et al*., 2004). Opportunities to influence the decision-making process increase the perception of procedural justice (De Cremer *et. al*., 2008; Schaubroeck *et. al*., 1994). If employees believe they are offered sufficient opportunities to participate in and/or have influence over decisions, then it increases their perceptions of procedural justice efficacy. Therefore, high levels of Employee Involvement (EI) through information sharing and participating in decision-making may attenuate the adverse effect of pay cuts (Zapata-Philan, *et al*., 2009).

A plethora of schemes have been developed within the generalised concept of HRM in practice including, *inter alia*, employee voice, participation, involvement, and engagement (Dibben *et al*, 2011; Timming, 2012). It emerged from the application of such practices that an embedded long-term and efficient Employee Involvement (EI) programme might be a way of achieving pay cuts without untold damage to morale and productivity. If workgroup members perceive particular characteristics of such HRM practices in the same way giving rise to a "collective phenomenon" (Kuenzi and Schminke, 2009), this would be evidence of the effectiveness of EI practices. These homogeneous perceptions are then aggregated to reflect a particular practice within the organization. In our study, EI is defined in terms of the two key dimensions mentioned earlier, information-sharing and participation in decision-making. The general proposition is that these might singly and together 'moderate' the impact of pay reduction on adverse employee attitudes (job satisfaction and organization commitment) and therefore on worker performance. As a result of this argument we conjecture that:

Hypothesis 2: EI moderates the impact of pay reduction on employee outcomes: employees who experience pay reductions are less negatively affected in terms of job satisfaction (H2a) and organizational commitment (H2b) in organizations characterised by higher than lower EI workplaces.

Method

Data and Sample

The matched employer-employee data, extracted from the 2011 Workplace Employment Relations Study (WERS), is used as the basis for this study. The WERS2011 is the sixth in a series of national surveys on employment relations at the workplace in Britain. It collects data from employers, employee representatives, and up to 25 employees per organization in a representative sample of workplaces.

The main objectives of each WERS survey have been to provide large-scale, statistically-reliable evidence about a broad range of employment relations and practices across almost every sector of the UK economy. The principal investigators were the Department of Business, Innovation and Skills (BIS), Advisory, Conciliation and Arbitration Services (ACAS), and the National Institute of Economic and Social Research (NIESR). It follows a systematic random sampling procedure and data collected through face-to-face structured interviews with the most senior manager responsible for employment relations and personnel issues. There is also a self-completion survey on paper or online with a representative group of up to 25 employees who are randomly selected from each workplace participating in the survey.

The WERS2011 dataset comprises 21,981 employee respondents with a maximum 25 each from the associated 2,680 organizations. Small firms with fewer than 50 employees were excluded from this study since the purpose of this study is to examine formal employee involvement practices. Among the remaining organizations, we only include workplaces with at least 15 permanently contracted respondents. Sufficient numbers of respondents from the same organization can provide a shared perception of EI practices within the organization (Hofmann, 1997), and the type of contract ensures these workers are more likely to be exposed to EI practices. This reduced the studied sample to 8,489 respondents, from 497 medium or large sized organizations.

The final sample contained: 47% of the respondents were men; the average age of the respondents was 43 years (S.D. = 12); and 44% were in a union or staff association. The average weekly gross earnings were £531. In terms of qualification, 46% had completed a GCSE grade or NVQ2; 37% had completed A level or NVQ 3 and 15% held an academic degree or NVQ level4 or above. Fifty-eight percent of these respondents are from the private sector, and the average number of employees of these firms was 521 (S.D. = 1,059). Fifty-seven percent of these employees are from medium sized establishment (50-249 employees), 20% are from big workplaces (250-499), and the rest are from large establishments (500 plus).

Measures

The definition of the main variables is presented in Table 1. The dependent variables are employees reported job satisfaction and organizational commitment. Job satisfaction was assessed using seven items tapping into the extent to which respondents are satisfied with: achievement, using initiative, influence, training received, opportunity to develop, pay, and the work itself. These items were rated from 1= strongly disagree to 5= strongly agree. An exploratory factor analysis indicated these seven items to fit one factor (eigenvalue is 3.59), reliability analysis also showed these items to be unidimensional (factor loadings>=0.45) and internally consistent (Cronbach's alpha = 0.85). This measure has been used in previous studies such as Brown *et al.* (2008) and Timming (2012). The organizational commitment variable was assessed using three items (rated from 1= strongly disagree to 5= strongly agree): I share the values of the workplace; I feel loyal to my organization; and I am proud to tell people for whom I work. An exploratory factor analysis indicated that these three items fit one factor (see eigenvalue, factoring loading and Cronbach's alpha value in Table 1).

The only independent variable used was whether or not the individual had a wage cut. This item is from one new question in WERS2011, used to capture the degree of any adverse effect caused by the 2008 recession on employees, including workload increase (29%), change of work or job (20%), reduction of contracted working hours (3%), wages freezes or cuts (37%), reduction in non-wage benefits (vehicles or meals) (6%), restriction of paid overtime (18%), taking unpaid leave (2%), and loss of training opportunities (13%). We intend to examine work attitudes between two groups: those who had a nominal wage cut or a wage freeze, and those who had a pay rise during the same period under the recession.

We appreciate that the impact of receiving a nominal pay cut is different from having a pay freeze (Bewley, 1999). Nominal pay cutting is rare due to its directly harmful effects, instead pay freezes are more common in reality - two-thirds of British workers had a pay freeze since 2009 (Gammel, 2012). The WERS data, however, did not separate pay cuts from pay freezes, due to the rarity of pay cuts. In our view, based on equity theory (Adam, 1965), those workers who experienced either form of pay reduction would express a lower valuation of their jobs when compared with comparable others who had a pay rise. This is to be expected, and with inflation (CPI) reaching a year-on-year high of 5.2% (ONS, 2017b) during the data collection period (February 2011 and June 2012) and those public service workers who had a zero increase in pay since 2008.

In a recession, workers are more likely to accept a pay cut if their firm is clearly doing badly. This is due to the strongly-held belief that there is a trade-off between jobs and wages, and that by sacrificing some wages now it will secure their jobs in the near future (Smith, 2015). In order to rigorously separate these effects, at the individual level, we control for gender, age, union membership, formal qualification, supervisory role, and actual weekly earnings. In particular, the perception of job security, for those who consider their position is secure; pay cuts may have a stronger adverse effect than those who perceive the threat of job loss during recession. At the organizational level, we control for establishment size (by number of employees on current payroll), the history of the establishment, the degree of adverse effect on business caused by the 2008 recession measured by managers' ratings (see the bottom of Table 1), and the industry by including the Standard Industrial Classification of Economic Activities (SIC) 2007 to control the potential impact.

The moderator used was employee involvement practices, which are conceptualised as organizational members' shared perceptions of EI within the organization. It is treated as an organizational context variable, and therefore assumed to be different across companies (Bliese *et al*, 2007). We derived two elements from the employee survey data: information sharing and participation in decision-making (see Table 1). Information sharing practices are measured by four items in which employees were asked to rate how good managers were, to keep employees informed about organizational changes; staffing strategies; changes in the way you do your job; and financial matters. Participation in decision-making is measured by three items in which employees were asked to rate: how good are managers at seeking the

views of employees or employee representatives; responding to suggestions from employees or employee representatives; and, allowing employees or employee representatives to influence final decisions. An exploratory factor analysis indicated these seven items fit one factor (see eigenvalue, factoring loading and Cronbach's alpha in Table 1). The mean of these seven items was used to represent individual perception of EI management practices (mean=3.11, SD=0.41).

We aggregated individual responses (15-25) per organization to the EI practices of their associated organization. To assess the consensus and reliability of group members' rating on EI, Intraclass Correlation Coefficient (ICC2), r_{wg} and Inter-rating reliability (ICC1) were calculated (Bliese *et al*., 2007; James *et al*., 1993). The first two criteria were above the conventional acceptable value of 0.70. r_{wg} =0.73 and ICC (2) =0.73, which show the consistency of assessment between group members. ICC (1) =0.15 indicates that organizational membership has a considerable (15%) impact on employees' perception of EI practices.

Table 1 about here

Methods of Analysis

A Hierarchical Linear Modelling approach was used to take into account the dependent nature of the measurements at both individual and organisational levels (Hox, 2010). We used STATA 13 to estimate two models. In each model, an intercept-only model in Step 1 was run for the outcome variables. This unconditional mean model allows for numerical evaluation of the relative influence on worker's attitudes from both the individual and organizational levels (Schreurs *et al*., 2013). In Step 2 the individual-level variables were included in the equation: age, gender, trade union membership, supervisory responsibility, formal qualification, weekly earnings, and employee's perception of job security. Then in step 3 organizational variables were added: size, history, degree of adverse impact caused the recession, business activity and EI. To reduce the possible problems with multi-collinearity, the EI was centred by its sample mean (i.e. ground-mean centring). In the last step, the cross-level item was included to examine the assumption that EI practices would moderate the effect of a pay cut on individual outcomes.

The restricted maximum likelihood estimation method is employed. Pseudo R^2 is calculated after each step to indicate the within-organization (subject to individual characteristics) and

between-organization (subject to organizational characteristics) variances explained by the variables included (Snijders and Bosker, 2012). The effect of multivariate significance in each step, which indicated the increased model fit, is compared with the previous step. This helps to determine whether or not the extra explanatory variable is needed. The deviance statistics (-2 Log likelihood) was reported to compare models that did not differ in the number of the fixed effects. These methods allow for an examination of the dataset which focuses upon, and successfully isolates the dependent variables and the independent variables. As a result, the moderating impact of EI can be studied.

Results

The inter-correlations of main variables at both the individual and organization levels are presented in Table 2. Those employees who had pay cuts are shown to have a significantly lower job satisfaction and organizational commitment than the comparison group. Collectively-perceived EI is positively and significantly correlated with job satisfaction and organizational commitment. Pay cuts are more likely to occur at workplaces that were largely affected by the recent recession and are negatively and significantly associated with employee-perceived job security.

Table 2 about here

The results of the multilevel analysis for job satisfaction and organizational commitment are presented in **Tables 3 and 4**. Of specific interest was the relationship between employee outcomes and both individual and organizational level characteristics. The intercept-only model reveals there are considerate systematic variances in the dependent variables between organizations. The ICC (1) value estimated based on the unconditional mean models were 0.12 for job satisfaction and 0.14 for organizational commitment. These values indicate 12% and 14% differences in employees' evaluation of job satisfaction and commitment attributable to organizational level settings. Variances caused by organizational characteristics on individual outcomes are expected to be between 5-25% in social sciences (Snijders and Bosker, 2012).

Variances existed at both levels of the data structure, and therefore predicting variables at each level were added one at a time. As shown in tables 3 and 4, individual level predictors are added in step 2 of these two models, and organizational level predictors are added in step 3. In step 2 of these two models, compared with those who had a pay rise, workers who had

pay cuts reduction had a significantly lower evaluation on both job satisfaction and organizational commitment after controlling for age, gender, union membership, qualification, supervisory role, earnings, and the perception of job security. This is reflected by a negative coefficient between pay reduction and job satisfaction ($b=-0.17$, $p<0.001$) and organizational commitment ($b=-0.15$, $p<0.001$). This shows the detrimental effect of pay reduction on work attitudes, and provides empirical results to support Hypothesis 1.

Tables 3&4 about here

Step 3 of the two modules, after controlling for both individual and organizational predicting variables, shows that EI is positively and significantly correlated with job satisfaction ($b=0.35$, $p<0.001$) and organizational commitment ($b=0.48$, $p<0.001$). In step 4 of tables 3 and 4, the interaction item between having pay reduction and EI was included. This item is positively and significantly associated with job satisfaction ($b=0.12$, $p<0.001$) and organizational commitment ($b=0.13$, $p<0.001$). This indicates that a higher level of EI can significantly attenuate the negative effect of having pay reduced on those who were affected. This is because the coefficient of the interaction item captures the difference in the slope of the EI on employees who experienced pay reduction and those who had a pay rise, the comparable others, since all other observable characteristics remain the same. The above results provide empirical evidence to support Hypothesis 2a and Hypothesis 2b.

Further, the interaction item at the low and high levels of EI were plotted (i.e. mean - 1S.D. the left vertical solid line; and mean +1S.D. the right vertical solid line) by the simple slope test, which are graphically represented in Figures 1 and 2. Based on the simple slope test and a visual inspection of the graphs in Figure 1, it shows that employees' evaluation of job satisfaction is 0.19 points lower for those who had pay reductions, *ceteris paribus*, than those who had pay rises in organizations with a low level of EI. The difference is reduced, however, to 0.11 in organizations where EI is higher (the right vertical line). This shows the adverse effect of pay cuts on job satisfaction is subject to the level EI.

Figure 1 about here

Figure 2 about here

As shown in Figure 2, the gap in organizational commitment between employees who had pay reductions and those who had a pay rise in low-EI level organizations are statistically

significant (b=0.19, p<0.001), but become moderate in high-EI level organizations (b=0.06, p<0.04). This again indicates that the extent of adverse effects of pay reductions on organizational commitment depends on the level of EI, and is less an issue in organizations with high perceived EI levels.

Discussion

Our study aims to contribute to the new challenges induced by the Great Recession of 2008 to employment relations where pay cuts/freezes continue to be widespread and expected. The credibility of the findings was enhanced by holding important individual and organizational level variables constant, with the use of a national representative data set. Employees who had pay reductions have a significantly lower rating on both job satisfaction and organizational commitment than their counterparts who had pay rises (no matter the degree of rise). This is in line with expected outcomes derived from the application of equity theory to any given situation (Adams, 1963, 1965).

The study reported evidence that the adverse impact of pay reductions on those who were affected is subject to the level of EI practices in that organization. This finding goes beyond earlier studies by explicitly testing "the cue" involved in what firms can do to attenuate the unavoidable negative effect. When adverse business changes happen, the atmosphere inside the firm becomes replete with rumours, anxieties, and manifestations of discontent. In organizations with systematic practices that involve employees through information sharing and having a say in decision-making, then and only then, there may be a measurable countervailing variable that negates the otherwise adverse impact on employees' attitudes to pay reductions. As predicted, a perceived high level of EI acted as a buffer to the usually negative effects of pay reductions on employees' attitudes.

The adverse consequences of pay reductions were significantly less pronounced in organizations characterised as having a high level of EI, as opposed to a low level, on employees' job satisfaction (Figure 1). This finding is evidence that information sharing and participation in decision-making make the adverse effect more acceptable through the mechanism of open procedural justice. In addition, the study showed that the gap in organizational commitment between employees who had a pay reduction (freeze) and the comparable other, those who had a pay rise, is much smaller in organizations with a high

level of EI (Figure 2). Surprisingly, in organisations featuring very high levels of EI (Figure 2 towards the right), those employees who had pay reductions showed even higher levels of commitment to their organizations than those who had a pay rise. That is to say that when those employees who had pay reductions were given sufficient explanation (information sharing) and invited to join in the process of decision-making, then this enables them to have a better understanding of the company's trading circumstances, and make them more likely to make sacrifices in an attempt to help the business and keep their jobs in the short run

Practical Implications

The impact of pay reductions on worsening worker morale has been generally recognised. With incidents of pay cutting greater than ever, the need for research-based evidence about its impact and 'cue' is urgent, but tellingly empirical inquiry remains a rarity (Kube *et al*., 2013). This study shows that perceived fairness is the central element in any analysis concerned with pay reductions, such fairness is derived from comparison with both past pay - the gift exchange mechanism (Akerlof, 1982), and more importantly with comparable others - equity theory (Adam,1963, 1965). Therefore, senior management teams need to develop a strategy in order to attenuate non-optional pay cuts through careful justification and open explanation by involving their employees. Failings in this area, alongside Brexit pressures, may lead to a crisis in talent retention, and worsening industrial relations where there are strong unions. We have shown that high levels of Employee Involvement practices can alleviate some adverse effects caused by pay reductions during the economic downturn. Since the perception of what constitutes 'fair' treatment changes over time and sector, EI practices have to be dynamic, flexible, and sustainable (Dibben et al, 2011, pp. 151-177).

Limitations and future research

Many workers during the recent recession, across a range of private and public sector organisations in the Western countries, had their pay cut. In the UK, pay freeze is the dominate method during the recession (Gammell, 2012). The data we used from WERS (2011) lumped together pay cuts and freeze, and this has caused some complexity in the analysis. Future researchers may wish to separate out these two categories of workers affected by different forms of pay reductions if it is possible.

As we have seen during the recession some employees and their union representatives may agree to take cuts in overtime, bonus, non-wage benefits (vehicles or meals), pension contribution in order to preserve jobs (Haldane, 2015). Some pay and benefit cuts are never reinstated even after the business upturn. What happens then to worker's attitudes and performance is largely unexplored. On the other hand, we also have less knowledge with regard to work attitudes and performance of those who had a pay rise while comparable others experienced pay reduction. In one field experiment, Cohn et al. (2014) reported that pay rises had no impact on performance, but this has not been examined by real-world data, or under different economic conditions.

At the macro-economic level, with the increased demand for greater pay parity and transparency, the Office of Federal Contract Compliance Programs in the United States (OFCCP, 2015), and the High Pay Commission report in Britain are the responses to the demand for pay fairness, especially when the gap between high and low earners is at its highest for a hundred years. There is considerable scope for more studies of both the causes and consequences of pay inequality at both national and firm level.

Conclusions

This study sought to highlight the widespread adverse changes on employees' attitudes and performance in the workplace during a period of unprecedented uncertainty and austerity. The general view was that felt-fairness concerns are at the centre of economic and social exchanges at the workplace. This perceived fair comparison is not only subject to the pay or pay changes received by the individual employee (Akerlof, 1982), but more importantly is made more acute through the lens of comparisons with meaningful reference group members (Adams, 1963, 1965). Thus, when management have to carry out adverse changes, the relevant internal and external reference groups have to be taken into account. In addition, when these adverse changes are carefully justified and clearly explained using the device of employee involvement practices, then the negative impact can be reduced. As shown in this study, when employees experience a wage cut or freeze, *ceteris paribus*, their attitudinal changes tend to lead to low morale and poor performance. A high level of employee involvement, however, can attenuate such adverse impacts due to increased intrinsic

motivation. From this, we conclude that nurturing a climate of Employee Involvement may contribute to a sustainable competitiveness under adverse economic conditions.

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Figures

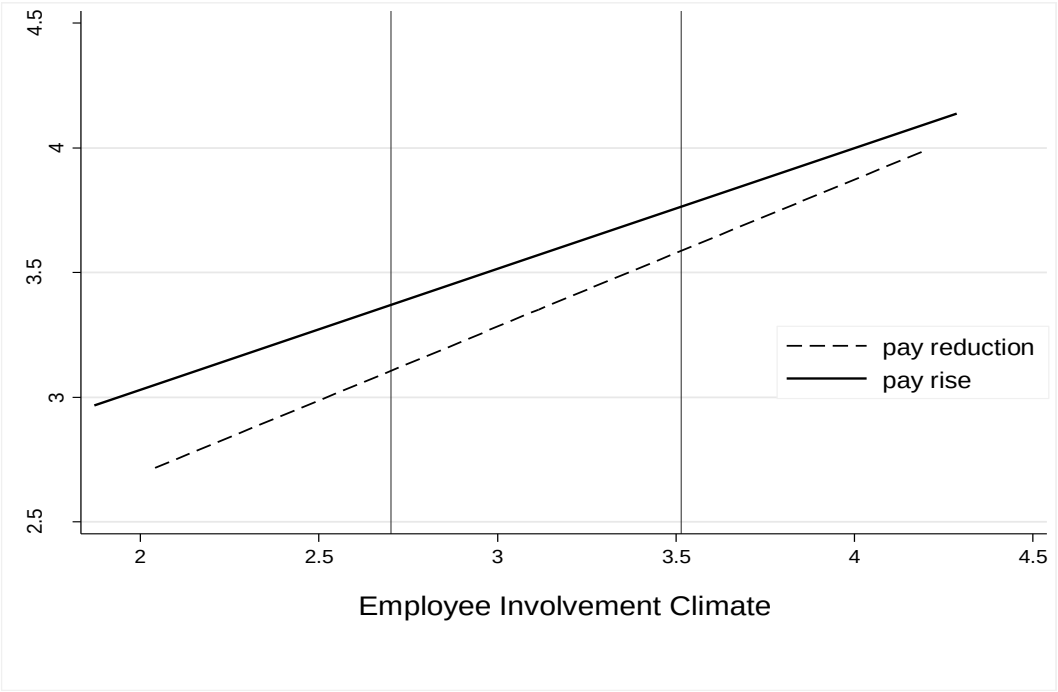

Figure 1 Interactive effects of EI and having a pay reduction on employee job satisfaction

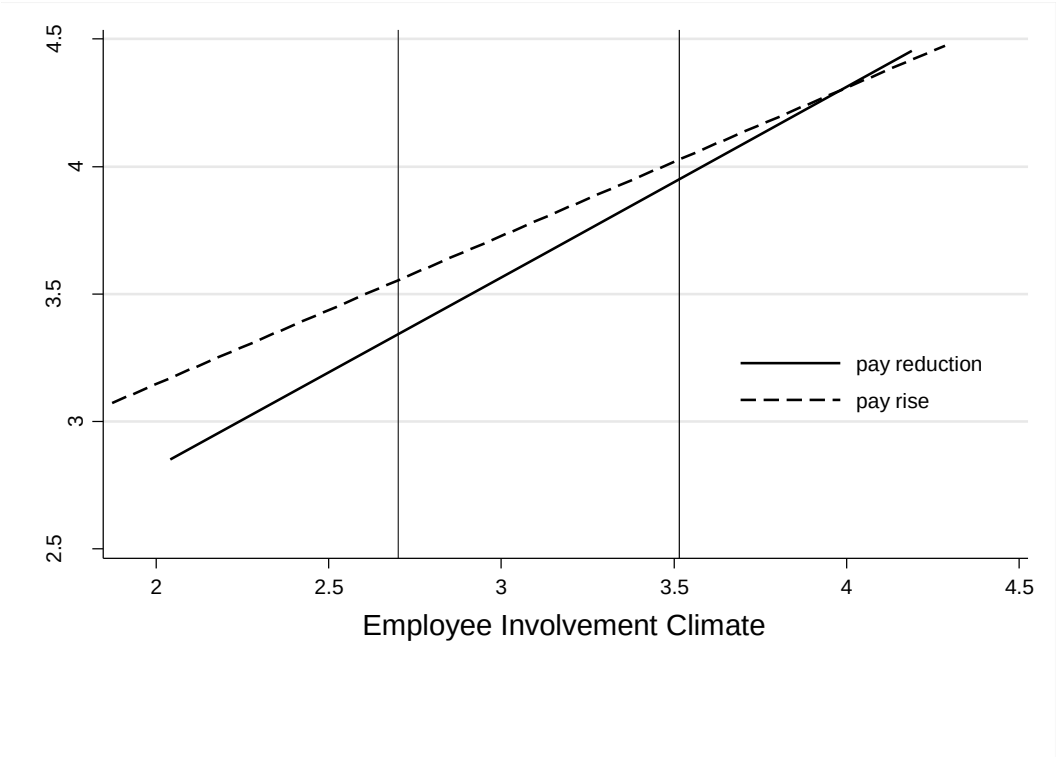

Figure 2 Interactive effects of EI and pay reduction on employee organizational commitment

Tables

Table 1 Variable definitions

Variable	definition	Mean (S.E.)
Gender	Male=1; female=0	0.47(0.50)
Age	Using mid-point to covert age groups: 16-17; 18-19; 20-21; 22-29;30-39;40-49;50-59;60-64; 65 and above	43(12)
Union membership	Union member =1; non-union member=0	0.44(0.49)
Earnings	Using mid-point to covert earnings from less than £60 to £1,051 or more per week	5.92(1.05)
Supervision duty	Do you supervise any other employees? Such as being a supervisor, foreman or line manager (Yes=1 No=0)	0.32(0.46)
Pay reductions	My wages were frozen or cut (1= yes; 0=no)	0.37(0.48)
Job security	Do you agree or disagree with the following statements about your job? I feel my job is secure in this workplace (5= strongly agree;1=strongly disagree)	3.30(1.26)
Employee Involvement	In general, how good would you say managers at this workplace are at keeping employees informed about the following?	3.11(0.97) Eigenvalue= 4.12
Information sharing	Changes in how organization is run Changes in staff Changes in the way you do your job Financial matters, including budgets or profits (5= strongly agree; 1= strongly disagree)	Cronbach's alpha = 0.91 factor loadings>=0.67
Participation in decision making	Overall, how good would you say managers at this workplace are at Seeking views of employees or employee representatives Responding to suggestions from employees or employee representatives Allowing employees or employee representatives influence final decisions (5= strongly agree; 1= strongly disagree)	
Job satisfaction	How satisfied are you with the following aspects of your job? The sense of achievement from work The scope for using your own initiative The amount of influence you have over job The training you receive The opportunity to develop your skills The amount of pay your received The work itself (5=very satisfied; 1=very dissatisfied)	3.48(0.74) Eigenvalue= 3.59 Cronbach's alpha = 0.85 factor loadings>=0.45
Organizational commitment	To what extent do you agree or disagree with the following statements about working here? I share many of the values of my organization I feel loyal to my organization I am proud to tell people who I work for (5= strongly agree; 1= strongly disagree)	3.73(0.87) eigenvalue= 1.81 Cronbach's alpha = 0.84 factor loadings>=0.67
The impact of recession	To what extent your (the manager) workplace has been adversely affected by the recent recession? 5=great deal; 1= no adverse effect	3.42(1.14)
Workplace size	Currently how many employees do you have on the payroll at this workplace?	521(1059)
Work place history	For how many years has this workplace been in operation? Please include time spent at other address	49 (55)

Table 2 Statistics on main variables in WERS2011

	Variables	ICC(1)	ICC(2)	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Male worker			1												
2	Age			0.04**	1											
3	Union membership			0.04**	0.16**	1										
4	Earnings(ln)			0.06**	-0.04**	0.14**	1									
5	Supervisory duty			0.06**	0.06**	-0.00	0.04**	1								
6	Pay reductions	0.25	0.78	0.01	0.06**	0.08**	0.10**	0.09**	1							
7	Job security	0.18	0.79	-0.00	-0.07**	-0.07**	-0.05**	0.08**	-0.18**	1						
8	EI perception	0.13	0.71	-0.06**	-0.01	-0.09**	-0.05**	0.14**	-0.11**	0.32**	1					
9	Job satisfaction	0.13	0.71	-0.05**	0.02**	-0.08**	-0.05**	0.18**	-0.17**	0.48**	0.59**	1				
10	Commitment	0.14	0.74	-0.08**	0.01	-0.06**	-0.04**	0.17**	-0.11**	0.31**	0.51**	0.58**	1			
11	Recession			-0.02	0.03**	0.04**	0.06**	-0.01	0.16**	-0.16**	-0.07**	-0.09**	-0.06**	1		
12	Workplace size (ln)			0.09**	-0.00	0.09**	0.08**	-0.00	-0.00	-0.05**	-0.04**	-0.05**	-0.06**	0.02*	1	
13	Workplace history(ln)			0.01	0.05**	0.06**	0.06**	0.03*	0.01	-0.00	-0.03*	0.02*	0.03*	0.08**	0.16**	1

Note: *p<0.05;** p<0.01.

Table 3 Hierarchical linear regression on employee job satisfaction

Fixed effect	Coef. (S. E.) Intercept-only	Coef. (S. E.) Step2	Coef. (S. E.) Step3	Coef. (S. E.) Step 4
Intercept	3.48***(0.01)	2.54***(0.06)	1.38***(0.10)	1.49***(0.11)
Gender		-0.05***(0.01)	-0.04**(0.02)	-0.04**(0.02)
Age		0.00***(0.00)	0.00***(0.00)	0.00***(0.00)
Union membership		-0.05***(0.01)	-0.04***(0.02)	-0.04***(0.02)
Having supervision duty		0.22***(0.02)	0.22***(0.02)	0.22***(0.02)
Had pay reductions		-0.17***(0.02)	-0.16***(0.02)	-0.43***(0.11)
Ln(earnings)		-0.01(0.00)	-0.01(0.01)	-0.01(0.01)
Job security		0.26***(0.00)	0.24***(0.01)	0.25***(0.01)
Qualifications		YES	YES	YES
Organizational Characteristics				
Organization age			0.03***(0.00)	0.03***(0.00)
Organization size			-0.01(0.00)	-0.01(0.00)
EI climate			0.35***(0.02)	0.31***(0.03)
Impact of recession			0.00(0.00)	0.00(0.00)
pay reductions* EI				0.12***(0.03)
Business activity			Yes	Yes
Random effect (Variance component)				
Organizational level (intercept)	0.07 (0.01)	0.03(0.00)	0.01(0.00)	0.01(0.00)
Individual level (residual)	0.48 (0.01)	0.36(0.00)	0.36(0.01)	0.36(0.01)
Goodness of fit				
Difference of -2*Log(df)		7579.15*2	7172.65*2	7166.10*2
Pseudo R^2 (between organizations)		58%	86%	86%
Pseudo R^2 (within organization)		29%	32%	32%
Number of organizations	497	497	477	477
Number of employees	8,489	8,084	7,779	7,779

Note: * p<0.1 **p<0.05;*** p<0.01

Table 4 Hierarchical linear regression on organizational commitment

Fixed effect	Coef. (S. E.) Intercept-only	Coef. (S. E.) Step 2	Coef. (S. E.) Step3	Coef. (S. E.) Step 4
Intercept	3.74***(0.01)	3.1***(0.07)	1.55***(0.14)	1.68***(0.15)
Gender		-0.10***(0.02)	-0.08***(0.02)	-0.08***(0.02)
Age		0.00***(0.00)	0.00***(0.00)	0.00***(0.00)
Union membership		-0.05***(0.02)	-0.03*(0.01)	-0.03*(0.02)
Having supervision duty		0.25***(0.02)	0.24***(0.02)	0.24***(0.02)
Had pay reductions		-0.15***(0.02)	-0.13***(0.05)	-0.52***(0.15)
Ln(earnings)		-0.02*(0.00)	-0.01(0.01)	-0.01(0.01)
Job security		0.17***(0.01)	0.16***(0.01)	0.16***(0.01)
Qualifications			YES	YES
Organizational Characteristics				
Organization age			0.04***(0.00)	0.04***(0.00)
Organization size			-0.02**(0.01)	-0.02**(0.00)
EI			0.48***(0.03)	0.44***(0.03)
Recession			0.01(0.00)	0.01(0.00)
Pay reductions* EI				0.13***(0.04)
Business activity			YES	YES
Random effect (Variance component)				
Organizational level (intercept)	0.11 (0.01)	0.07(0.01)	0.03(0.00)	0.03(0.00)
Individual level (residual)	0.66(0.01)	0.57(0.01)	0.56(0.01)	0.56(0.01)
Goodness of fit				
Difference of -2*Log(df)		9436.32*2	8935.33*2	8931.56*2
Pseudo R^2 (between organization)		37%	63%	63%
Pseudo R^2 (within organization)		17%	24%	24%
Number of organizations	497	497	477	477
Number of employees	8,489	8084	7,779	7,779

Note: * p<0.1 **p<0.05;*** p<0.01